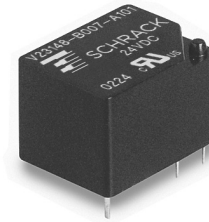


**Power PCB Relay U/UB (V23148)**

- 1 pole 7A, mono or bistable
- 1 form C (CO) or 1 form A (NO) or 1 form B (NC contact)
- Bistable and DC version
- Wash tight version
- Version for 10A on request



Typical applications  
Heating control, installation, battery powered equipment



**Approvals**

UL E214024  
Technical data of approved types on request

Contact Data	Standard	Bistable	Sensitive
Contact arrangement		1 form C (CO) or 1 form A (NO) or 1 form B (NC)	
Rated voltage		250VAC	
Max. switching voltage		400VAC	
Rated current	7A	7A	5A
Limiting making current, max 4 s, duty factor 10%	12A	12A	12A
Breaking capacity max.	1750VA	1750VA	1250VA
Contact material	AgNI 90/10	AgNI 90/10	AgNI 90/10
Frequency of operation, with/without load		600/18000h <sup>-1</sup>	
Operate/release time typ.	5/3ms	-	7/3 ms
Set/reset time typ.	-	5/3 ms	-
Bounce time typ., form A/form B	2/10 ms	2/10 ms	2/10 ms
Mechanical endurance		>20x10 <sup>6</sup> operations	

**Contact ratings**

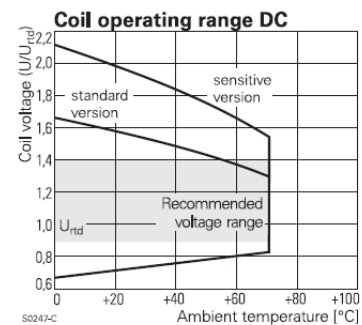
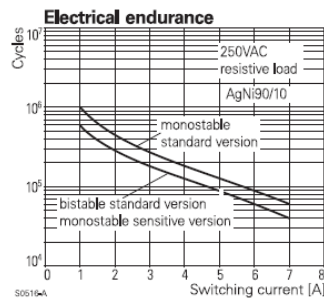
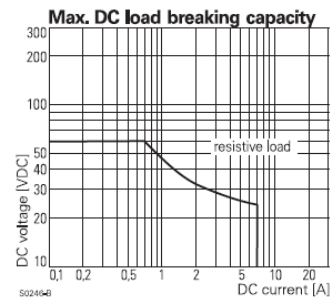
Type	Contact	Load	Cycles
<b>UL508</b>			
U/UB C/A/B	(CO/NO/NC) 7A, 250VAC, general purpose, 40°C		6.000

Coil Data	Standard	Bistable	Sensitive
Coil voltage range	5 to 48 VDC	3 to 48 VDC	5 to 48 VDC
Operative range IEC 61810	2	2	2
Reset voltage min., % of rated coil voltage	-	25%	-
Reset voltage max., % of rated coil voltage	-	45%	-
Rated operate power	- 900 to 1300mW/20ms	-	-

**Coil versions, DC coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
<b>Standard coil</b>					
002	5	3.5	0.5	56	446
003	6	4.2	0.6	80	450
005	12	8.4	1.2	320	450
007	24	16.8	2.4	1280	450
008	48	33.6	4.8	3800	606
<b>Sensitive coil</b>					
102	5	3.7	0.5	80	313
103	6	4.4	0.6	110	327
105	12	8.8	1.2	440	327
107	24	17.5	2.4	1780	324
108	48	35.0	4.8	4000	576

All figures are given for coil without pre-energization, at ambient temperature +23°C. Other coil voltages on request.



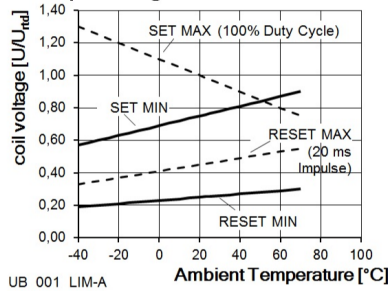
**Power PCB Relay U/UB (V23148) (Continued)**

**Coil versions, bistable 1 coil**

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
001	3	2.3	0.75	8	1125
002	5	3.9	1.25	22	1136
003	6	4.7	1.5	33	1091
005	12	9.4	3.0	119	1210
007	24	18.7	6.0	475	1213
008	48	37.4	12.0	1750	1317

All figures are given for coil without pre-energization, at ambient temperature +23°C.  
Other coil voltages on request.

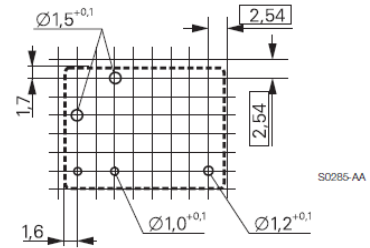
**Coil operating bistable**



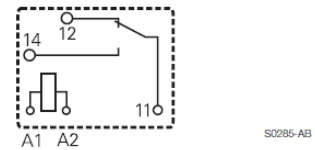
**PCB layout / terminal assignment**

Bottom view on solder pins

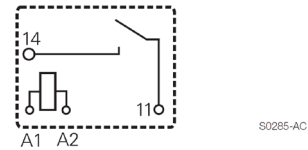
Monostable and bistable 1 coil



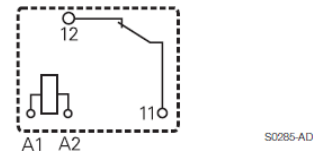
Form C contact (CO)



Form A contact (NO)



Form B contact (NC)



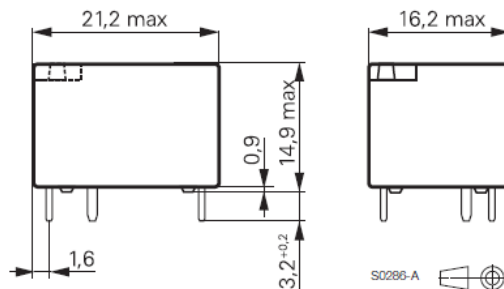
Insulation Data	2kV <sub>rms</sub>	4kV <sub>rms</sub>
	Version V23148-*0***	Version V23148-*1***
Initial dielectric strength		
between open contacts	1000V <sub>rms</sub>	1000V <sub>rms</sub>
between contact and coil	2000V <sub>rms</sub>	4000V <sub>rms</sub>
Clearance/creepage		
between contact and coil	≥2.5/2.5mm	≥3.5/3.5mm
Material group of insulation parts	≥IIIa	≥IIIa

**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

Ambient temperature	-25 to +70°C
Category of environmental protection	
IEC 61810	RTIII - wash tight
Terminal type	PCB-THT
Weight	8.7g
Vibration resistance (functional), form A/form B	10/10g
Shock resistance (functional), form A/form B	10/10g
Resistance to soldering heat THT	
IEC 60068-2-20	260°C/5s
Packaging/unit	25 pcs.

**Dimensions**



**Power PCB Relay U/UB (V23148)** (Continued)

<b>Product code structure</b>	Typical product code	<b>V23148</b>	<b>-A</b>	<b>0</b>	<b>0</b>	<b>07</b>	<b>-A</b>	<b>101</b>
<b>Type</b>		Power PCB Relay U/UB						
<b>Version</b>		<b>A</b> Monostable (Miniature power relay U) <b>B</b> Bistable (Miniature power relay UB, remanence version)						
<b>Dielectric strength coil-contact</b>		<b>0</b> 2kV <sub>rms</sub> <b>1</b> 4kV <sub>rms</sub>						
<b>Version</b>		<b>0</b> Monostable <b>0</b> Bistable <b>1</b> Standard <b>0</b> Standard <b>1</b> Sensitive						
<b>Coil</b>		Coil code: please refer to coil versions table						
<b>Contact configuration</b>		<b>A</b> 1 form C contact (1 CO) <b>C</b> 1 form B contact (1NC) <b>B</b> 1 form A contact (1 NO)						
<b>Contact configuration</b>		<b>101</b> AGNI10						

Other types on request

Product code	Version	Dielectric	Version	Arrangement	Part Number
V23148-A0005-C101	Monostable	2000 Vrms	Standard	1 form B (NC)	1-1393203-0
V23148-A0007-A101	relay ,U	contact-coil		1 form C (CO)	1-1393203-1
V23148-A0007-B101				1 form A (NO)	1-1393203-2
V23148-A0007-C101				1 form B (NC)	1-1393203-3
V23148-A0008-A101				1 form C (CO)	1-1393203-4
V23148-A0002-A101				1 form C (CO)	1393203-1
V23148-A0002-B101				1 form A (NO)	1393203-2
V23148-A0002-C101				1 form B (NC)	1393203-3
V23148-A0003-A101				1 form C (CO)	1393203-4
V23148-A0003-B101				1 form A (NO)	1393203-5
V23148-A0004-A101				1 form C (CO)	1393203-7
V23148-A0005-A101				1 form C (CO)	1393203-8
V23148-A0005-B101				1 form A (NO)	1393203-9
V23148-A0102-A101			Sensitive	1 form C (CO)	1-1393203-5
V23148-A0102-B101				1 form A (NO)	1-1393203-6
V23148-A0102-C101				1 form B (NC)	1-1393203-7
V23148-A0103-A101				1 form C (CO)	1-1393203-8
V23148-A0103-B101				1 form A (NO)	1-1393203-9
V23148-A0103-C101				1 form B (NC)	2-1393203-0
V23148-A0105-A101				1 form C (CO)	2-1393203-1
V23148-A0105-B101				1 form A (NO)	2-1393203-2
V23148-A0105-C101				1 form B (NC)	2-1393203-3
V23148-A0107-A101				1 form C (CO)	2-1393203-4
V23148-A0107-B101				1 form A (NO)	2-1393203-5
V23148-A0107-C101				1 form B (NC)	2-1393203-6
V23148-A1005-A101		4000 Vrms	Standard	1 form C (CO)	2-1393203-7
V23148-A1007-A101		contact-coil		1 form C (CO)	2-1393203-8
V23148-A1105-A101				1 form C (CO)	2-1393203-9
V23148-A1105-B101				1 form A (NO)	3-1393203-0
V23148-A1107-A101				1 form C (CO)	3-1393203-1
V23148-B0007-A101	Bistable	2000 Vrms		1 form C (CO)	1-1393204-0
V23148-B0007-B101	relay ,UB	contact-coil		1 form A (NO)	1-1393204-1
V23148-B0007-C101				1 form B (NC)	1-1393204-2
V23148-B0008-A101				1 form C (CO)	1-1393204-3
V23148-B1001-A101				1 form C (CO)	1-1393204-5
V23148-B0001-A101				1 form C (CO)	1393204-1
V23148-B0002-A101				1 form C (CO)	1393204-2
V23148-B0002-B101				1 form A (NO)	1393204-3
V23148-B0003-B101				1 form A (NO)	1393204-5
V23148-B0003-C101				1 form B (NC)	1393204-6
V23148-B0005-A101				1 form C (CO)	1393204-7
V23148-B0005-B101				1 form A (NO)	1393204-8
V23148-B0005-C101				1 form B (NC)	1393204-9

This list represents the most common types and does not show all variants covered by this data sheet.

Other types on request

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